WEIGHT Z-SCORE CHANGES WITH EXCLUSIVE HUMAN MILK DIET IN THE EXTREMELY LOW BIRTH WEIGHT INFANTS- AN INTERIM SUBGROUP ANALYSIS OF PROSPECTIVE OBSERVATIONAL STUDY

T Parmar [1,2], S Allworth [1], S Tapawan [1], K Lui [1,2], T Schindler [1,2], S Bolisetty [1]

1.Newborn Care Unit, Royal Hospital for Women, Sydney, NSW, Australia

2.University of New South Wales, Sydney, Australia

Background

In October 2023, we introduced a standardised nutrition bundle that included implementation of exclusive human milk diet (EHMD, mother's milk ± donor milk and a human milk-based fortifier, Humavant [Prolacta Bioscience]) for extremely low birth weight infants (ELBW) <1000g at birth until 34 weeks corrected gestational age (CGA). In this interim analysis, we compared weight z-score changes from birth to 34 weeks CGA pre and post-implementation of EHMD.

Aim

To assess growth outcomes of extremely low birth weight infants (ELBW) <1000g post implementation of our standardised nutritional care bundle.

Methods

Post-implementation phase consisted of all inborn ELBW infants born between October 2023 to March 2024. Pre-implementation phase was from January to June 2023. Decline in weight-for-age z-score from birth to 34 weeks CGA was used to define malnutrition [1] :

Mild (0.8-1.2 SD)
Moderate (>1.2-2.0 SD)
Severe (>2.0 SD)

Results

At 34 weeks corrected gestational age (CGA), the incidence of malnutrition was significantly lower in the study group, decreasing from 88% in the control group to 39%. The study group also demonstrated a notable reduction in the severity of malnutrition. Moreover, there were no reported cases of necrotising enterocolitis (NEC) in the study group, in contrast to an 11% incidence observed in the control group.

Conclusion

Introducing an EHMD for ELBW infants significantly reduced the incidence of malnutrition at 34 weeks CGA in this interim subgroup analysis.

Decline in weight—for age z-score at 34 weeks CGA	Humavant, n=18	Control, n=17	P value
Normal (<0.8 SD), n(%)	11(61%)	2(11.8%)	<0.01
Mild (0.8-1.2 SD), n(%)	5(27.8%)	6(35.3%)	0.90
Moderate-severe (>1.2 SD), n(%)	2(11.1%)	9(52.9%)	<0.05

Reference

1.Goldberg DL, et al. Identifying malnutrition in preterm and neonatal populations: Recommended indicators. *J Academy Nutr Diet.* 2018; 118:1571-1582